REMARKS

In response to the official action dated September 7, 2005, the above-noted amendment to claim 14 is merely intended to correct a clear error in the claim and to render all of the language of the claim fully consistent. New claims 28-32 are respectfully submitted in order to claim additional specific aspects of the present invention and to more clearly distinguish those claims over the prior art references hereagainst.

Claims 14-27 have been rejected as being anticipated by Ochiai *et al.* Ochiai *et al.* is said to teach a tube for retaining fluid including an outer wall with a lateral access as well as a domed portion including a sealing surface surrounding the lateral access opening and a sensor sealingly disposed on the sealing surface surrounding the lateral access in the tube. This rejection is respectfully traversed in view of the above amendments and for the reasons set forth hereinafter.

Before describing the specific distinctions between the present claims and the art of record, including Ochiai *et al.*, reference is made to the overall nature and substance of the present invention. As is described in the specification, although there are a number of prior known devices for measuring various properties of fluids, including devices such as those shown in the references cited herein, in each of these cases, it remains necessary to provide a rather complex and expensive solution to the problem of measuring properties of a fluid within a tube while maintaining direct contact between a sensor and the fluid within that tube, and at the same time preferably without in any way disturbing the flow of that fluid. The present invention, however, has permitted all of these desirable results to be achieved, and to surprisingly do so in an extremely simple and straightforward manner, and to overcome all of the deficiencies of these prior art devices.

Turning specifically to Ochiai *et al.*, this reference is directed to a respiratory airflow meter which includes a cylindrical flow path forming member 4 which is attached to couplings 5 and 6. The flow path forming member 4 itself is of a reduced inner diameter forming a restricted portion 7. A sensor 11 is mounted within this tube by forming a recess in the flow path forming member 10 which includes a sensor window 13. Thus, the sensor itself is arranged on a sensor board 15 which is mounted on the recess 10 and which is then provided with a lip 24 arranged in the mounting portion 10 through a gasket 25 to urge the sensor board against and seal the window 13.

It can thus be seen that the device shown in Ochiai *et al.* first and foremost does not include a tube which has the required domed portion. However, without including such a domed portion, but instead dealing only with a flat, straight tube itself, the overall significance and simplicity of the present invention can never be realized. Without a domed portion, one cannot simply provide a lateral access opening with a planar sealing portion, and thus permit the sensor itself to seal that opening, and do so without significantly interfering with the flow of fluid within the tube itself. The device shown in Ochiai *et al.* thus does not and cannot provide a sensor which is itself sealingly disposed on the sealing surface surrounding the lateral access opening. To the contrary, the sensor 11 in the case of Ochiai *et al.* is mounted on a sensor board which in turn is mounted on recess 10 in the manner shown therein.

Referring next to the dependent claims in this application, claim 16 requires that the domed portion of the tube comprise a bend in the entire tube, which is clearly not the case in Ochiai *et al.* which has no domed portion to begin with. Similarly, claim 17 requires that the domed portion

comprise an outward bulge on the side of the tube, which also is clearly not shown in this reference. Claim 20 requires that the sensor comprise a temperature sensor, a pressure sensor, a flow meter or a conductivity sensor, none of which is shown in Ochiai *et al*. Finally, turning to the newly added claims, claim 28 includes all of the limitations of prior claim 14 and also specifically requires that the sensor be in direct contact with the sealing surface, which is clearly not the case here. It is therefore respectfully submitted that all of these claims now patentably distinguish over Ochiai *et al*., and withdrawal of this reference is therefore respectfully solicited.

Claims 14-27 have been rejected as being anticipated by Tillotson *et al*. The Examiner contends that Tillotson *et al*. teaches a tube which includes an outer wall, a lateral access domed portion and a sealing surface on the outside wall of the tube surrounding the lateral access opening, as well as a sensor sealingly disposed on the sealing surface surrounding the lateral access in the tube. This rejection is respectfully traversed in view of the above amendments and arguments and for the reasons set forth hereinafter.

The Tillotson *et al*. reference is even less relevant than Ochiai *et al*. In this patent, a complex structure is provided in a pulmonary interface system which includes a disposable air sensing device 12, as is shown in FIG. 4 thereof. The air sensing device includes a rigid venturi tube 18 in which a hot air anemometer 22 is positioned to detect the mass of air passing therethrough. The venturi tube thus includes a central orifice 44 as well as an expiration orifice 46 and inspiration orifice 48 which are connected to the flow direction indicator housing 24. It is thus once again noted that the device in Tillotson *et al*. does not include a tube with a domed portion, as required by all of the claims herein. Furthermore, Tillotson

et al., even in its central portion, includes only a drilled out orifice 44 which is filled with a sensor plug 50 which holds the anemometer 22, as well as a temperature detector 54 which extend into the tube itself. No sensor is sealingly disposed on the sealing surface on the outer wall of the tube itself in this reference. These differences are once again of considerable significance, since they do not suggest the simple and straightforward solution to the problems defined in the background of the present application, by merely mounting a sensor on the domed portion of a tube so the sensor itself is not only in contact with the fluid, does not significantly interfere with the flow of fluid therein, and itself seals the outer surface of the lateral access opening. Tillotson *et al.* certainly does not suggest this claimed apparatus, in which the specific types of sensors set forth in claim 20 are utilized or in which the sensor is in direct contact with the sealing surface on the outer wall of the tube, and/or does not extend to any significant extent into the tube, which is clearly the case in Tillotson *et al.* It is thus respectfully submitted that once again all of the claims presently set forth in this application are patentably distinguishable over Tillotson *et al.*

Finally, claims 14-27 have been rejected as being anticipated by Uramachi *et al.* The Examiner contends that Uramachi *et al.* teaches a tube for retaining fluid including an outer wall and a lateral access dome portion including a sealing surface on the outer wall surrounding the lateral access opening, and a sensor sealingly disposed on the sealing surface surrounding the lateral access in the tube. This rejection is respectfully traversed in view of the above amendments and arguments and for the reasons set forth hereinafter.

Uramachi *et al.* is even further from the claimed invention herein. This reference relates to a flow rate sensor to measure air intake flow in an internal combustion engine. In

the case of Uramachi *et al.*, as seen for example in FIG. 2 thereof, there is a main flow passage 26 which has a specified conversion structure for the purposes thereof. A support section 21 supports a pipe conduit 29 within the fluid passage 26 to form a coaxial relationship therewith. Furthermore, a flow rate detecting element 22, including a flow rate detecting resistance 11 and fluid temperature compensating resistance 13, are formed on the surface of the ceramic substrate and fixed in the support section 21. It is therefore quite clear that the device shown in Uramachi *et al.* in no way teaches or suggests the apparatus of the presently claimed invention. It does not include a tube with a domed portion as required by all of these claims, nor does it include a sensor which is disposed on the sealing surface of the outer wall of the tube. It certainly does not disclose such apparatus in which the sensor is directly in contact with the sealing surface and/or which itself effects sealing of the lateral access opening. Indeed, it clearly extends into the tube, as is prohibited by these claims, such as claim 30, and thus interferes with the flow of fluid therein.

It is therefore respectfully submitted that all of the claims now set forth in this application clearly possess the requisite novelty, utility and unobviousness to warrant their immediate allowance, and such action is therefore respectfully solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By _____

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